

## ABSTRACT FOR EP 612772

L1 ANSWER 1 OF 1 WPIX (C) 2002 THOMSON DERWENT

AN 1994-265910 [33] WPIX

DNC C1994-121587

TI Luminescing copolymers contg. rare earth complexes as luminescing component - useful in medical diagnostics and for labelling of polymers.

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IN HEILIGER, L

PA (FARB) BAYER AG

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PI EP 612772 A1 19940831 (199433)\* DE 10p <--

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DE 4305959 A1 19940901 (199434) 7p

JP 06256429 A 19940913 (199441) 8p

US 5442021 A 19950815 (199538) 6p

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R: BE CH DE FR GB IT LI NL

DE 59402958 G 19970710 (199733)

ADT EP 612772 A1 EP 1994-102220-19940214; DE 4305959 A1 DE 1993-4305959

19930226; JP 06256429 A JP 1994-43298 19940218; US 5442021 A US

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AN 1994-265910 [33] WPIX

AB EP 612772 A UPAB: 19941010

The following are claimed; (A) luminescing copolymers of formula (A)a-(B)b (I) A = a luminescing component; B = a (co)monomer; a = 0.001-20 wt.%; b = 99.0000-30 wt.%. (B) Rare earth complexes of formula  $M^{3+}(L)_n$  (II), useful as component (A) in (I).  $M^{3+}$  = a rare earth metal cation; L = a polymerisable complex ligand; n = 1-4. (II) are of formula (IIa) or (IIb).

USE/ADVANTAGE - The copolymers are useful as labels for biologically active molecules, e.g. protein and nucleic acids, in medical diagnostics.

They are also useful for labelling plastics. The new copolymers have greater luminescences intensity than corresp. known cpds..

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ABEQ US 5442021 A UPAB: 19950927

Luminescent copolymers of formula (A)a-(B)b are new, where A is a rare earth metal complex of formula  $M^{3+}(L)_n$ ;  $M^{3+}$  is a rare earth metal cation; L is a polymerisable complex ligand contg. a polymerisable double bond; n is 1-4; B is a radical polymerisable comonomer; and a, b are wt.% of A and B a being 0.0001-20 wt.% and b being 99.9999-80 wt.%.  $M^{3+}$  is esp. an anion of europium or and A is pref. of formula (II) or (III).

USE/ADVANTAGE - (I) are used in medical diagnosis for marking substance for biologically active molecules, e.g. proteins, nucleic acids, antibodies and aminated gene probes, and for marking plastics. (I) have better luminescence intensity than prior art cpds.

Dwg.0/0

ABEQ EP 612772 B UPAB: 19970702

Luminescent copolymers of the structure (A)<sub>a</sub>-(B)<sub>b</sub>, wherein A is a complex salt of a rare earth metal of the formula M<sup>3+</sup>(L)<sub>n</sub> in polymerised form, in which M is Dy, Sm, Eu or Tb, L is a bidentate ligand containing a conjugated  $\pi$  system, at least one oxygen or nitrogen atom and at least one polymerisable double bond, and n is an integer from 1 to 4, B is a (co)monomer in polymerised form, and a and b are the proportions of A and B in the copolymer, where a is 0.0001 to 20 wt.% and b is 99.9999 to 80 wt.%.

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